

In the Claims:

Please amend the claims as follows:

1. (thrice amended) A method for developing a custom farm management plan for production agriculture pertaining to a farm, comprising the steps of:

obtaining input information pertaining to a farm from said a user via an electronic communications network, the input information defining at least one cropping strategy;

obtaining third-party financial information comprising at least crop production cost data and crop market price data;

analyzing said input information pertaining to said farm and said third-party financial information in accordance with a mathematical model having an objective function for profit maximization bounded by resource constraints consistent with the defined cropping strategy;
and

maximizing the objective function to generate a corresponding first custom farm management plan based on said input information and said third-party financial information, the objective function indicative of a corresponding economic performance of the farm for display or provision to said user.

2. (previously once amended) The method according to claim 1 wherein said custom farm management plan for production agriculture comprises at least one of a graphical display and a tabular display of crop selection and allocation of farm resources for seasonal or multi-seasonal cropping strategies.

3. (previously once amended) The method according to claim 2 wherein said farm resources comprise one or more of the following: capital, land, labor, machinery, crop storage, irrigation system capacity, water rights, and nutrient loading.

4. (previously canceled) The method according to claim 1 wherein said prompting said user to input information comprises the step of transmitting an instruction signal to said user via said electronic communications network.
5. (original) The method according to claim 1 wherein said input information pertaining to said farm is at least one farm management preference selected from the group of agronomic, operational and physical farm information.
6. (previously once amended) The method according to claim 1 wherein the third-party financial information is selected from the group of seed prices, fertilizer prices, production contracts, agriculture insurance rates, agriculture marketing information, agriculture consultant's information, agriculture accounting information, and lender's interest rates.
7. (previously canceled) The method according to claim 1 wherein said third party industry professional is selected from the group of input supply retailers, seed manufacturers, crop protection manufacturers, seed manufacturers' representatives, crop protection manufacturers' representatives, independent crop consultants, crop insurance agents, agricultural lenders, marketing advisors, agricultural certified public accountants, agricultural equipment manufacturers, and agricultural equipment manufacturers' dealers.
8. (previously canceled) The method according to claim 1 wherein the analyzing said mathematical model including information pertaining to said farm is a mathematical optimization algorithm selected from the group of linear, integer, mixed integer programming, and parametric programming.
9. (previously canceled) The method according to claim 1 wherein said global electronic communication network is selected from the group consisting of the Internet, an Intranet, an extranet, a Local Area Network, a telephone network, a cellular network, a satellite network, a personal communication system, a television network, a wireless data network, a wireless Local Area Network, a wireless local loop/distribution system, a Voice Over Internet Protocol network, and a wide area network.
10. (previously canceled) The method according to claim 1 further comprising the step of allowing access to said input information by said third party industry professional.
11. (previously canceled) The method according to claim 1 wherein said form of said custom farm management plan is a tabular form.

12. (previously canceled) The method according to claim 1 wherein said form of said custom farm management plan is a graphical form.

13. (previously once amended) The method according to claim 1 further comprising the step of performing an iterative process to determine at least one additional farm management plan, wherein said iterative process comprises modifying at least one controllable variable associated with the mathematical model, said at least one controllable variable selected from the group of crop programs, crop rotation patterns, different amounts of production contracts, different types of production contracts, and crop insurance.

14. (previously canceled) The method according to claim 13 wherein said iterative process comprises modifying at least one controllable variable of said mathematical model, said at least one controllable variable selected from the group of crop programs, crop rotation patterns, different amounts of production contracts, different types of production contracts, and crop insurance.

15. (previously amended) The method according to claim 13 wherein said iterative process comprises modifying at least one uncontrollable variable of said mathematical model, said at least one uncontrollable variable selected from the group of crop prices, yields and production costs.

16. (original) The method according to claim 13 wherein said user selects a desired farm management plan that meets desired goals from the first farm management plan and the at least one additional farm management plan.

17. (original) The method according to claim 16 wherein said user compares between the first farm management plan and the at least one additional farm management plan based on gross income, downside risk, opportunity cost risk and resource use.

18. (original) The method according to claim 16 wherein said desired farm management plan is determined from profit maximization, risk minimization, resource minimization, and environmental stewardship.

19. (previously canceled) A farm management system for developing a custom farm management plan for production agriculture for a farm, comprising:

- a. a first computer, said first computer comprising a first microprocessor, a first memory storage, and a first display;
- b. a second computer, said second computer comprising a second microprocessor, a second memory storage, and a second display, said second computer located remotely from said first computer;
- c. a host computer, said host computer comprising a host microprocessor and a host memory storage;
- d. an electronic communications network, said network electronically coupling the host computer and said first computer and said second computer, such that said first computer and said second computer can communicate with said host computer;
- e. a host computer program, said computer program being resident in said host memory storage, said computer program configured to request and receive input information pertaining to a farm from said first computer, said input information comprising agricultural information relating to said farm;
- f. said computer program configured to receive third party industry information from a third party industry professional using said second computer, said third party industry information comprising agricultural information relating to said third party industry professional;
- g. said computer program configured to generate and analyze a mathematical model based on said input information pertaining to said farm, and said third party industry information from said third party industry professional using said second computer;
- h. said computer program configured to generate a custom farm management plan for a user based on said analysis of said mathematical model;
- i. said computer program configured to transmit over the electronic communications network said custom farm management plan to said user in a form displayable on said first computer.

20. (previously canceled) The farm management system according to claim 19 wherein said custom farm management plan for production agriculture comprises crop selection and allocation of farm resources for seasonal or multi-seasonal cropping strategies.

21. (previously canceled) The farm management system according to claim 20 wherein said farm resources comprise capital, land, labor, and machinery, crop storage, irrigation system capacity and water rights, nutrient loading.

22. (previously canceled) The farm management system according to claim 19 wherein said configured to request input information comprises transmitting an instruction signal to said first computer via said electronic communications network.

23. (previously canceled) The farm management system according to claim 19 wherein said input information pertaining to said farm is at least one farm management preference selected from the group of agronomic, operational and physical farm information.

24. (previously canceled) The farm management system according to claim 19 wherein third party industry information is selected from the group of seed prices, fertilizer prices, production contracts, agriculture insurance rates, agriculture marketing information, agriculture accounting information, and lender's interest rates.

25. (previously canceled) The farm management system according to claim 19 wherein said third party industry professional is selected from the group of input supply retailers, seed manufacturers, crop protection manufacturers, seed manufacturers' representatives, crop protection manufacturers' representatives, independent crop consultants, crop insurance agents, agricultural lenders, marketing advisors, agricultural certified public accountants, agricultural equipment manufacturers, and agricultural equipment manufacturers' dealers.

26. (previously canceled) The farm management system according to claim 19 wherein configured to analyze said input information pertaining to said farm is a mathematical optimization algorithm selected from the group of linear, integer, mixed integer programming, and parametric programming.

27. (previously canceled) The farm management system according to claim 19 wherein said electronic communication network is selected from the group consisting of the Internet, an Intranet, an extranet, a Local Area Network, a telephone network, a cellular network, a satellite network, a personal communication system, a television network, a wireless data

network, a wireless Local Area Network, a wireless local loop/distribution system, a Voice Over Internet Protocol network, and a wide area network.

28. (previously canceled) The farm management system according to claim 19 further comprising a computer program configured to allow access to said input information by said third party industry professional.

29. (previously canceled) The farm management system according to claim 19 wherein said form of said custom farm management plan is in tabular form.

30. (previously canceled) The farm management system according to claim 19 wherein said form of said custom farm management plan is a graphical form.

31. (previously canceled) The farm management system according to claim 19 further comprising a computer program configured to perform an iterative process to determine at least one additional farm management plan.

32. (previously canceled) The farm management system according to claim 31 wherein said iterative process comprises the modification of at least one controllable variable, said at least one controllable variable selected from the group of crop programs, crop rotation patterns, different amounts of production contracts, different types of production contracts, and crop insurance.

33. (previously canceled) The farm management system according to claim 31 wherein said iterative process comprises the modification of at least one uncontrollable variable, said at least one uncontrollable variable selected from the group of crop prices, yields and production costs.

34. (previously canceled) The farm management system according to claim 31 wherein said user selects a desired farm management plan that meets desired goals from the farm management plan and the at least one additional farm management plan.

35. (previously canceled) The farm management system according to claim 34 wherein said user compares between the farm management plan and the at least one additional farm management plan based on gross income, downside risk, opportunity cost risk and resource use.

36. (previously canceled) The farm management system according to claim 34 wherein said desired farm management plan is determined from profit maximization, risk minimization, resource minimization, and environmental stewardship.

37. (previously canceled) A computer readable medium comprising a computer program code for generating a custom farm management plan for production agriculture for a farmer pertaining to a farm, said computer program comprising:

- a. a computer program code for requesting and receiving input information from said farmer, said input information comprising agricultural information relating to said farm;
- b. a computer program code for receiving third party industry information from a third party, said third party industry information comprising agricultural information relating to said third party;
- c. a computer program code for generating and analyzing a mathematical model of said farm based said input information from said farmer, and said third party industry information from said third party;
- d. a computer program code for generating a custom farm management plan for said farmer based on said mathematical model analysis;
- e. a computer program code for transmitting over an electronic communications network said custom farm management plan to said farmer.

38. (previously canceled) The computer readable medium according to claim 37 wherein said custom farm management plan for production agriculture comprises crop selection and allocation of farm resources for seasonal or multi-seasonal cropping strategies.

39. (previously canceled) The computer readable medium according to claim 38 wherein said farm resources comprise capital, land, labor, machinery, crop storage, irrigation system capacity and water rights, and nutrient loading.

40. (previously canceled) The computer readable medium according to claim 37 wherein said computer program code for requesting input information comprises the step of transmitting an instruction signal to said user via said electronic communications network.

41. (previously canceled) The computer readable medium according to claim 37 wherein said input information pertaining to said farm is at least one farm management preference selected from the group of agronomic, operational and physical farm information.

42. (previously canceled) The computer readable medium according to claim 37 wherein said third party industry information is selected from the group of seed prices, fertilizer prices, production contracts, agriculture insurance rates, agriculture marketing information, agriculture consultant's information, agriculture accounting information, and lender's interest rates.

43. (previously canceled) The computer readable medium according to claim 37 wherein said third party is selected from the group of input supply retailers, seed manufacturers, crop protection manufacturers, seed manufacturers' representatives, crop protection manufacturers' representatives, independent crop consultants, crop insurance agents, agricultural lenders, marketing advisors, agricultural certified public accountants, agricultural equipment manufacturers, and agricultural equipment manufacturers' dealers.

44. (previously canceled) The computer readable medium according to claim 37 wherein said computer program code for analyzing said generating and analyzing said mathematical model is a mathematical optimization algorithm selected from the group of linear, integer, mixed integer programming, and parametric programming.

45. (previously canceled) The computer readable medium according to claim 37 wherein said electronic communication network is selected from the group consisting of the Internet, an Intranet, an extranet, a Local Area Network, a telephone network, a cellular network, a satellite network, a personal communication system, a television network, a wireless data network, a wireless Local Area Network, a wireless local loop/distribution system, a Voice Over Internet Protocol network, and a wide area network.

46. (previously canceled) The computer readable medium according to claim 37 further comprising a computer program code for allowing access to said input information by said third party.

47. (previously canceled) The computer readable medium according to claim 37 further comprising computer program code for performing an iterative process to determine at least one additional farm management plan.

48. (previously canceled) The computer readable medium according to claim 47 wherein said computer program code for performing an iterative process comprises modifying at least one controllable variable, said at least one controllable variable selected from the group of crop programs, crop rotation patterns, different amounts of production contracts, different types of production contracts, and crop insurance.

49. (previously canceled) The computer readable medium according to claim 47 wherein said computer program code for performing an iterative process comprises modifying at least one uncontrollable variable, said at least one uncontrollable variable selected from the group of crop prices, yields and production costs.

50. (previously canceled) The computer readable medium according to claim 47 wherein said farmer selects a desired farm management plan that meets desired goals from the farm management plan and the at least one additional farm management plan.

51. (previously canceled) The computer readable medium according to claim 50 wherein said farmer compares between the farm management plan and the at least one additional farm management plan based on gross income, downside risk, opportunity cost risk and resource use.

52. (previously canceled) The computer readable medium according to claim 50 wherein said desired farm management plan is determined from profit maximization, risk minimization, resource minimization, and environmental stewardship.

53. (previously presented) The method according to claim 1 wherein the objective function is expressed as the following representation:

$$\text{Max } Z \sum c_j y_j x_j - p_j x_j,$$

where Max Z represents a maximization function, c_j is the price/yield unit, y_j is the yield/acre for crop identifier j, x_j represent a crop program variable for crop identifier j, and p_j is production costs/acre for crop identifier j.

54. (once amended) The method according to claim 1 wherein the resource constraints are expressed as the following equation:

$$\sum a_{ij} x_j + a_{1j} x_j + \dots a_{nj} x_n \leq b_i \text{ for each } i$$

where a_{ij} is a constraint coefficient that represents a measure of resource consumption of resource i , for crop identifier j , where x_j represent crop program variable, where b_i represent a maximum farm resource limitation for resource i , where j ranges from 1 to n .

55. (once amended) The method according to claim 1 wherein the objective function is expressed as the following representation:

$$\text{Max } Z \sum [c_j y_j x_j - p_j x_j] * z_{in} z_{in}$$

where Max Z represents a maximization function, c_j is the price/yield unit, y_j is the yield/acre for crop identifier j , x_j represent a crop program variable for crop identifier j , and p_j is production costs/acre for crop identifier j , and where z_{in} is a binary variable with a value of 0 or 1, representing the presence or absence of a planted crop i in field n .

56. (once amended) The method according to claim 1 wherein the resource constraints are expressed as the following representation of a land constraint:

$$\sum x_1 * z_{1n} + x_2 * z_{2n} + \dots x_n * z_{3n} \leq b_{\text{land}}, \text{ wherein } x_1 \text{ represents total acres of crop 1, } x_2 \text{ represents total acres of crop 2 up to } x_n \text{ representing total acres of crop}$$

n , where z_{in} is a binary variable with a value of 0 or 1, representing the presence or absence of a planted crop i in field n , where b_{land} represents available acres.

57. (once amended) The method according to claim 1 wherein the resource constraints are expressed as the following representation of a land constraint:

$\sum x_1 + x_2 + \dots + x_n \leq b_{land}$, wherein x_1 represents total acres of crop 1, x_2 represents total acres of crop 2 up to x_n representing total acres of crop n , where b_{land} represents available acres.

58. (once amended) The method according to claim 1 wherein the resource constraints are expressed as the following representation of a land constraint:

$\sum p_1 x_1 z_{1n} + p_2 x_2 z_{2n} + \dots + p_n x_n z_{nn} \leq b_{capital}$, wherein x_1 represents total acres of crop 1, x_2 represents total acres of crop 2 up to x_n representing total acres of crop n , wherein p_1 represents total production cost of crop 1, p_2 represents total production cost of crop 2 up to x_n representing total production cost of crop n , where z_{in} is a binary variable with a value of 0 or 1, representing the presence or absence of a planted crop i in field n , where $b_{capital}$ represents available capital and z_{nn} is the value of z_{in} for field n .

59. (once amended) A system for developing a custom farm management plan for production agriculture pertaining to a farm, comprising the steps of:

a first module for obtaining input information pertaining to a farm from said a user via an electronic communications network, the input information defining at least one cropping strategy;

a second module for obtaining third-party financial information comprising at least crop production cost data and crop market price data;

a third module for analyzing said input information pertaining to said farm and said financial information in accordance with a mathematical model having an objective function for profit maximization bounded by resource constraints consistent with the defined cropping strategy; and

a fourth module for maximizing the objective function to generate a corresponding first custom farm management plan based on said input information and said third-party financial information, the objective function indicative of a corresponding economic performance of said farm for display or provision to said user.

60. (previously presented) The system according to claim 59 wherein the objective function is expressed as the following representation:

$$\text{Max } Z \sum c_j y_j x_j - p_j x_j,$$

where Max Z represents a maximization function, c_j is the price/yield unit, y_j is the yield/acre for crop identifier j, x_j represent a crop program variable for crop identifier j, and p_j is production costs/acre for crop identifier j.

61. (previously presented) The system according to claim 59 wherein the resource constraints are expressed as the following equation:

$$\sum a_{ij} x_j + a_{i1} x_1 + \dots + a_{in} x_n \leq b_i \text{ for each } i$$

where a_{ij} is a constraint coefficient that represents a measure of resource consumption of resource i, for crop identifier j, where x_j represent crop

program variable, where b_i represent a maximum farm resource limitation for resource i , where j ranges from 1 to n .

62. (once amended) The system according to claim 59 wherein the objective function is expressed as the following representation:

$$\text{Max } Z \sum [c_j y_j x_j - p_j x_j] * z_{in} z_{in}$$

where Max Z represents a maximization function, c_j is the price/yield unit, y_j is the yield/acre for crop identifier j , x_j represent a crop program variable for crop identifier j , and p_j is production costs/acre for crop identifier j , and where z_{in} is a binary variable with a value of 0 or 1, representing the presence or absence of a planted crop i in field n .

63. (once amended) The system according to claim 59 wherein the resource constraints are expressed as the following representation of a land constraint:

$\sum x_1 * z_{1n} + x_2 * z_{2n} + \dots + x_n * z_{3n} \leq b_{land}$, wherein x_1 represents total acres of crop 1, x_2 represents total acres of crop 2 up to x_n representing total acres of crop n , where z_{in} is a binary variable with a value of 0 or 1, representing the presence or absence of a planted crop i in field n , and where b_{land} represents available acres.

64. (once amended) The system according to claim 59 wherein the resource constraints are expressed as the following representation of a land constraint:

$\sum x_1 + x_2 + \dots + x_n \leq b_{land}$, wherein x_1 represents total acres of crop 1, x_2 represents total acres of crop 2 up to x_n representing total acres of crop n, where b_{land} represents available acres.